UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,554	09/07/2005	Richard John Evans	038819.55861US	9119

23911 7590 12/09/2009

CROWELL & MORING LLP
INTELLECTUAL PROPERTY GROUP
P.O. BOX 14300
WASHINGTON, DC 20044-4300

EXAMINER	
FUJITA, KATRINA R	

ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
12/09/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,554	Applicant(s) EVANS, RICHARD JOHN	
	Examiner KATRINA FUJITA	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _18 September 2009_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,2,4-6 and 8-15_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1, 2, 4-6, and 8-15_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is responsive to Applicant's remarks received on September 18, 2009. Claims 1, 2, 4-6, and 8-15 remain pending.

Claim Objections

2. The following is a quotation of 37 CFR 1.75(a):

> The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

3. Claims 1 and 15 are objected to under 37 CFR 1.75(a), as failing to particularly point out and distinctly claim the subject matter which application regards as his invention or discovery.

Claim 1 requires "the images" at line 20. It is unclear whether this is intended to be the same as the "video images" in line 2. Therefore, the following will be assumed for examination purposes: -- the ~~images~~ video images --. The same applies to claim 15 at line 6.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 2, 4-6, and 8-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 15 require deriving a normal behavior for each position in the video images in terms of velocity by accumulating the data in a four-dimensional histogram and classifying a track as normal by comparing the frequency of occupation of a histogram cell with an occupancy threshold. First of all, it is unclear how the four-dimensional histogram is constructed. The claims state that the four dimensions are "x-position, y-position, x-velocity and y-velocity”. As a histogram generally contains a vertical axis to represent the frequency of occurrence, how do the four dimensions relate to the vertical axis? Are the horizontal axes vectors of position and velocity? Furthermore, the claims state that the comparison is done using a histogram cell “representing a corresponding position and velocity within the video images” with an occupancy threshold. As it is unclear how the histogram cell is defined, it is further unclear how a comparison using the histogram cell is conducted. Lastly, as the claims state that the histogram accumulates the "normal pattern of behavior" for the video images, this implies that all tracks within the video images are "normal" and any

subsequent comparisons of the tracks within the video images would be classified as "normal". Further clarification is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 2, 8-12, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Owens et al. ("Application of the Self-Organising Map…", IEEE Article 2000, hereinafter Owens 2000) and Owens et al. ("Novelty Detection in Video Surveillance…", Springer Article 2002, hereinafter Owens 2002).

Regarding **claim 1**, Owens 2000 discloses a method for a video motion anomaly detector for processing video images to detect an event of interest ("detecting suspicious behavior of pedestrians using a computerised grey-scale video surveillance system" at page 1, section 1, line 1), comprising:

receiving, by the video motion anomaly detector, a video signal representing the video images to be processed ("video sequences were recorded" at page 3, section 4, line 4);

extracting, by the video motion anomaly detector, at least one point feature from the video signal ("sequence of centroid points for each tracked object" at page 3, section 2, line 2);

tracking, by the video motion anomaly detector, the position and movement of the at least one point feature within the video images to generate a corresponding at least one track, each of said at least one track representing a corresponding point feature in terms of its position and its velocity within each of the video images ("flow vector, f = [x, y, dx. dy]" at page 3, section 4, paragraph 3, line 1; "Each individual point in the trajectory is translated into a feature vector" at page 5, section 4, last sentence);

using, by the video motion anomaly detector, an iterative learning process to derive a normal pattern of behavior for each track for each position within the video images in terms of observed incidences of point feature velocity at said each position ("training data consisted of 206 normal trajectories" at page 6, section 6, paragraph 2, line 5), wherein the learning process accumulates data representing the behavior of the track(s) over a period of time using four dimensions representing x-position, y-position, x-velocity and y-velocity, of the track(s) within the video image ("flow vector, f = [x, y, dx. dy]" at page 3, section 4, paragraph 3, line 1);

comparing present behavior of a track at a certain position within the image to the respective derived normal pattern of behavior at the certain position in terms of observed point feature velocity at the certain position ("test set included 23 unusual trajectories and 16 normal trajectories" at page 6, section 6, paragraph 2, line 6; "complete trajectory was classified as unusual if it contained two or more points

classified as unusual” at page 6, section 6, paragraph 4; “novel points are instances in which a trajectory segment was either in an unfamiliar orientation, or of an unfamiliar magnitude (i.e. unusual speed)” at page 6, section 6, paragraph 8, line 9); and

in response to the present behavior falling outside the normal pattern of behavior in terms of observed point feature velocity at the certain position, the video motion anomaly detector generates a signal (as seen in figure 3a, points that are unusual are shown in black, and the trajectory is labeled as unusual).

Owens 2000 does not explicitly disclose that the data is accumulated in a four-dimensional histogram and that the comparison process classifies a track according to a comparison of the frequency of occupation of a histogram cell representing a corresponding position and velocity within the video images with an occupancy threshold.

However, as the Examiner is unclear how the four-dimensional histogram of Applicant's claim is defined, it appears that the neural network of Owens 2000 is equivalent to the claimed four-dimensional histogram (“two layer neural network that is able to “learn” to represent distributions of the data presented to it” at page 5, section 5, line 2). As such, Owens 2000 also discloses that the comparison process classifies a track according to a comparison of the frequency of occupation of a histogram cell (“winning neuron” at page 6, section 5, paragraph 7, line 2) representing a corresponding position and velocity within the video images with an occupancy threshold (“If this distance exceeds a threshold value then the feature vector is

considered novel, and the trajectory is identified as suspicious" Owens 2000 at page 6, section 5, paragraph 7, line 5)

Owens 2000 does not explicitly disclose that the signal is an alarm signal.

Owens 2002 teaches a method for a video motion anomaly detector for processing video images to detect an event of interest (see title and figure 3), comprising:

in response to the present behavior falling outside the normal pattern of behavior, the video motion anomaly detector generates an alarm signal ("In abnormal sequences the novelty accumulator nodes are allowed to increase their activity, generating an alarm state" at abstract, last sentence; "alarm reporting as the event is developing" at page 1254, section 4, second paragraph, line 5).

It would have obvious at the time the invention was made to one of ordinary skill in the art to utilize the alarm state signal of Owens 2002 to signify the unusual behavior of Owens 2000 such that crime prevention may occur by alerting a surveillance operator to the existence of possible suspicious behavior (see Owens 2002 at page 1254, second to last paragraph).

Regarding **claim 2**, the Owens 2000 and Owens 2002 combination discloses a method wherein the alarm signal causes at least one of the following effects:

draw the attention of the operator ("drawing the attention of a human operator to such events" Owens 2000 at page 1, section 1, line 6);

place an index mark at the appropriate place in recorded video data; and

trigger selective recording of video data.

Regarding **claim 8**, the Owens 2000 and Owens 2002 combination discloses a method wherein the comparison process acts to classify as normal behavior a track adjacent or near a cell which is above the occupancy threshold, despite the track appearing in a cell below the occupancy threshold, where one cell is considered to be near another if the distance between them is below a predetermined distance threshold (as seen in Owens 2002 at figure 3e and 3f, these tracks are considered normal, though there are points that are abnormal).

Regarding **claim 9**, the Owens 2000 and Owens 2002 combination discloses a method wherein abnormal tracks are filtered ("objective of the system is to act as a filter, detecting behavior that appears out of the ordinary" Owens 2000 at page 1, section 1, line 4), whereby an active alarm signal is generated in response to an abnormal track which resembles a number of other abnormal tracks, in terms of at least one of position, velocity and time ("pedestrian moving in between parked vehicles shows high rates of velocity change as the path reverses direction" Owens 2000 at page 5, section 4, paragraph 3, line 8; a trajectory similar to the one in figure 3 would be indicated as unusual as it would resemble figure 3 in terms of position and velocity).

Regarding **claim 10**, the Owens 2000 and Owens 2002 combination discloses a method wherein abnormal tracks are filtered, whereby an active alarm signal is generated in response only to an abnormal track which has been classified as abnormal on a predetermined number of occasions (i.e. once).

Regarding **claim 11**, the Owens 2000 and Owens 2002 combination discloses a method wherein abnormal tracks are filtered, whereby an active alarm signal is generated in response only to a track being classified as abnormal for the first time (once the trajectory is indicated as unusual and the operator's attention is drawn to it, there is no further need to raise an alarm).

Regarding **claim 12**, the Owens 2000 and Owens 2002 combination discloses a method wherein abnormal tracks are filtered, whereby an active alarm signal is generated only in response to a filtered version of a classification as abnormal rising above a predetermined threshold value ("If this distance exceeds a threshold value then the feature vector is considered novel, and the trajectory is identified as suspicious" Owens 2000 at page 6, section 5, paragraph 7, line 5; "complete trajectory was classified as unusual if it contained two or more points classified as unusual" Owens 2000 at page 6, section 6, paragraph 4).

Regarding **claim 14**, the Owens 2000 and Owens 2002 combination does not explicitly disclose that subsequent active alarm signals are inhibited if caused by an abnormal track within a predetermined distance of another track which has previously generated an alarm.

However, Owens 2000 suggests that subsequent active alarm signals can be inhibited if caused by an abnormal track within a predetermined distance of another track which has previously generated an alarm ("One of the three normal trajectories classified as unusual, traced a pedestrian moving…Upon examination of the training set, it was found that a trajectory in this location and direction was only represented

once in the training set…This implies a requirement to update the neural network online with newly-detected normal trajectories when they occur" at page 6, section 6, paragraph 6; as such, subsequent unusual trajectories that resemble the initial unusual trajectory will not generate an alarm).

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the neural network updating as suggested by Owens 2000 in the system of the Owens 2000 and Owens 2002 combination to overcome the problem that "novel but actually acceptable behaviour will be classified as suspicious" (Owens 2000 at page 6, section 6, paragraph 6, line 14).

Regarding **claim 15**, Owens 2000 discloses an apparatus for processing video images to detect an event of interest ("standard PC" at page 7, section 7, paragraph 1, last sentence; "detecting suspicious behavior of pedestrians using a computerised grey-scale video surveillance system" at page 1, section 1, line 1), comprising:

a source of video images, which produces a video signal representing the video images to be processed ("video sequences were recorded" at page 3, section 4, line 4);

a feature extraction device that receives the video signal, and produces data representing at least one point feature detected within the image ("sequence of centroid points for each tracked object" at page 3, section 2, line 2);

a feature tracking device that receives the data representing said at least one point feature, and produces data representing a track that is representative of position and velocity of each of said at least one point feature within the image ("flow vector, f =

[x, y, dx. dy]" at page 3, section 4, paragraph 3, line 1; "Each individual point in the trajectory is translated into a feature vector" at page 5, section 4, last sentence);

a learning device that receives the data representing tracks of said at least one point feature, and derives a normal range of behavior of each position within the video images in terms of observed incidences of point feature velocity at said each position in response to operation of a learning process on the data representing the tracks ("training data consisted of 206 normal trajectories" at page 6, section 6, paragraph 2, line 5);

a classification device that receives both the signal representing the normal range of behavior and the data representing the tracks, and is adapted to compare the signal and the data for a corresponding position within the video images and to issue a normal/abnormal signal in accordance with the outcome of such comparison ("test set included 23 unusual trajectories and 16 normal trajectories" at page 6, section 6, paragraph 2, line 6; "complete trajectory was classified as unusual if it contained two or more points classified as unusual" at page 6, section 6, paragraph 4; "novel points are instances in which a trajectory segment was either in an unfamiliar orientation, or of an unfamiliar magnitude (i.e. unusual speed)" at page 6, section 6, paragraph 8, line 9); and

a generation device that receives the normal/abnormal signal and generates at least one active signal in response to the normal/abnormal signal indicating abnormal behavior of at least one track (as seen in figure 3a, points that are unusual are shown in black, and the trajectory is labeled as unusual).

Owens 2000 does not explicitly disclose that the data is accumulated in a four-dimensional histogram and that the classification device classifies a track according to a comparison of the frequency of occupation of a histogram cell representing a corresponding position and velocity within the video images with an occupancy threshold.

However, as the Examiner is unclear how the four-dimensional histogram of Applicant's claim is defined, it appears that the neural network of Owens 2000 is equivalent to the claimed four-dimensional histogram ("two layer neural network that is able to "learn" to represent distributions of the data presented to it" at page 5, section 5, line 2). As such, Owens 2000 also discloses that the classification device classifies a track according to a comparison of the frequency of occupation of a histogram cell ("winning neuron" at page 6, section 5, paragraph 7, line 2) representing a corresponding position and velocity within the video images with an occupancy threshold ("If this distance exceeds a threshold value then the feature vector is considered novel, and the trajectory is identified as suspicious" Owens 2000 at page 6, section 5, paragraph 7, line 5)

Owens 2000 does not explicitly disclose that the signal is an alarm signal.

Owens 2002 teaches a system for processing video images to detect an event of interest (see title and figure 3), comprising:

a generation device that receives the normal/abnormal signal and generates at least one active signal in response to the normal/abnormal signal indicating abnormal

behavior of at least one track ("In abnormal sequences the novelty accumulator nodes are allowed to increase their activity, generating an alarm state" at abstract, last sentence; "alarm reporting as the event is developing" at page 1254, section 4, second paragraph, line 5).

It would have obvious at the time the invention was made to one of ordinary skill in the art to utilize the alarm state signal of Owens 2002 to signify the unusual behavior of Owens 2000 such that crime prevention may occur by alerting a surveillance operator to the existence of possible suspicious behavior (see Owens 2002 at page 1254, second to last paragraph).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Owens 2000 and Owens 2002 as applied to claim 1 above, and further in view of Kamin (US 4,198,653).

The Owens 2000 and Owens 2002 combination discloses the elements of claim 1 as described in the 103 rejection above.

The Owens 2000 and Owens 2002 combination does not disclose that subsequent active alarm signals are inhibited for a predetermined time interval after a first active alarm signal has been produced.

Kamin discloses a method in the same field of endeavor of video tracking wherein subsequent active alarm signals are inhibited for a predetermined time interval after a first active alarm signal has been produced ("first alarm pulse A' (Fig. 3d), which

originates from field 2 and which would normally result in a spurious alarm, is suppressed at the right time" at col. 4, line 24).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the delay of Kamin in the alarm generation device of the Owens 2000 and Owens 2002 combination to provide "high sensitivity with respect to events which are relevant to a genuine alarm" (Kamin at col. 1, line 59).

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Owens 2000 and Owens 2002 as applied to claim 1 above, and further in view of Franke et al. (US 6,411,328).

The Owens 2000 and Owens 2002 combination discloses a method wherein:

the learn behavior stage segregates the tracks according to a velocity threshold ("relatively low rates of velocity change are seen in normal pedestrian motion, while a pedestrian moving in between parked vehicles shows high rates of velocity change" Owens 2000 at page 3, section 4, paragraph 3, line 6);

data concerning the mobile tracks is stored in said four-dimensional histogram (see claim 1 above).

The Owens 2000 and Owens 2002 combination does not disclose that tracks moving at a velocity below the velocity threshold are considered stationary while tracks moving at a velocity in excess of the velocity threshold are considered mobile.

Franke et al. teaches a method for a video motion anomaly detector for processing video images to detect an event of interest ("visible spectrum images may be used to detect traffic-related incidents" at col. 11, line 14), wherein:

tracks moving at a velocity below the velocity threshold are considered stationary while tracks moving at a velocity in excess of the velocity threshold are considered mobile (“Slow vehicles can be identified in a time sequence of images by a method comprising estimating vehicle speed for each vehicle as above and identifying vehicles moving faster than a predetermined speed. Speeding vehicles can be identified by an analogous method in which vehicles moving faster than a predetermined speed are identified in the image sequence” at col. 8, line 59).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the velocity distinction of Franke et al. to identify the tracks of the Owens 2000 and Owens 2002 combination such that the operator may be warned of “the presence of substantially stationary objects in a relatively high-risk region of interest” (Franke et al. at col. 10, line 31) and the proper corrective action may occur thusly.

The Owens 2000, Owens 2002 and Franke et al. combination does not explicitly disclose that data concerning the stationary tracks is stored in a two-dimension histogram representing x-position and y-position within the video image.

However, it is well-known in the art to utilize two-dimensional histograms to store position data and therefore would have been obvious at the time the invention was

made to store the stationary data of the Owens 2000, Owens 2002, and Franke et al. combination in a two-dimensional histogram.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Owens 2000 and Owens 2002 as applied to claim 1 above, and further in view of Zuniga (US 5,546,474).

The Owens 2000 and Owens 2002 combination discloses the elements of claim 1 as described in the 103 rejection above.

The Owens 2000 and Owens 2002 combination does not disclose that a cell size of the histogram varies with speed.

Zuniga discloses a method in the same field of endeavor of region detection wherein a cell size (“size of a cell can vary” at col. 10, line 14) of the histogram varies with speed (“moment of inertia” at col. 10, line 9).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the cell varying of Zuniga in the histogram of the Owens 2000 and Owens 2002 combination to allow the user to evaluate a “performance/quality tradeoff” (Zuniga at col. 10, line 15).

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Owens 2000 and Owens 2002 as applied to claim 1 above, and further in view of Jepson et al. (US 7,058,205).

The Owens 2000 and Owens 2002 combination discloses the elements of claim 1 as described in the 103 rejection above.

The Owens 2000 and Owens 2002 combination does not disclose that the histogram is periodically de-weighted in order to bias the result of the learning process towards more recent events.

Jepson et al. discloses a method in the same field of endeavor of motion tracking wherein the histogram is periodically de-weighted in order to bias the result of the learning process towards more recent events (“up-weight the more recent frames” at col. 3, line 19).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the weight varying of Jepson et al. to the histogram of the Owens 2000 and Owens 2002 combination such that a “optimal motion estimation is achieved” (Jepson et al. at col. 3, line 12).

Response to Arguments

Summary of Remarks (@ response page labeled 10): The Schwerdt reference does not disclose the specifics of the four-dimensional histogram, particularly the occupancy threshold.

Examiner's Response: The Examiner has removed the Schwerdt reference from the rejections. As the 112 2^{nd} paragraph rejections have rendered the claim language unclear, the Examiner has established that the Owens 2000 reference is equivalent to the claim language instead as described above.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATRINA FUJITA whose telephone number is (571)270-1574. The examiner can normally be reached on M-Th 8-5:30pm, F 8-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katrina Fujita/
Examiner, Art Unit 2624

/VIKKRAM BALI/
Supervisory Patent Examiner, Art Unit 2624